



Non-Government Standards and How to Exploit Them

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Outline



- OGC
- 2008 Work Plan
- Focus Areas
- What is Empire Challenge
- Example of OGC specs in Empire Challenge 2007
- Empire Challenge 2008 Key Dates
- OGC Pilot Status

The OGC Mission



To serve as the global forum for the collaboration of developers and users of geospatial content and services, and **to develop international standards for geospatial interoperability.**

OpenIOOS.org ...where standards enable innovation

Powered by:

This interoperability demonstration represents an effort to develop a Web Services Architecture for Ocean Observing. We are seeking participants who would like to serve their in-situ salinity and/or sea water temperature data via SOS based Web Services. Read how at the SOS4Tethys site.

SOS Realtime Map 53 Platforms Reporting Salinity

Real-time Maps
Sea Surface Temp
Wind
Clouds
East Coast
Cloudscape Sky
Wave Forecasts
Earth
Sensor Obs. Service
SOS Maps

Historical Storms
All Storm Forecasts

Last Storm
Fifteen
Water level Forecast
Wave Forecast

Data Providers
ACCO
DMCMOS
Mbaris
NOAA
NAROC
SEAS203
TAMS-TAMU
University Program
VIMS

This site funded by:

NOAA (National Centers)
NOAA (Ocean Service)
NOAA (Atmospheric Centers)
NOAA (Coastal Services)
NOAA (Satellite Services)
USGS (Winds)

Real time access to OOS sensor data via OGC standards



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OGC CityGML Urban Model of Berlin
Source: www.3d-stadtmodell-berlin.de



Helping the World to Communicate Geographically

OGC - Quick Background

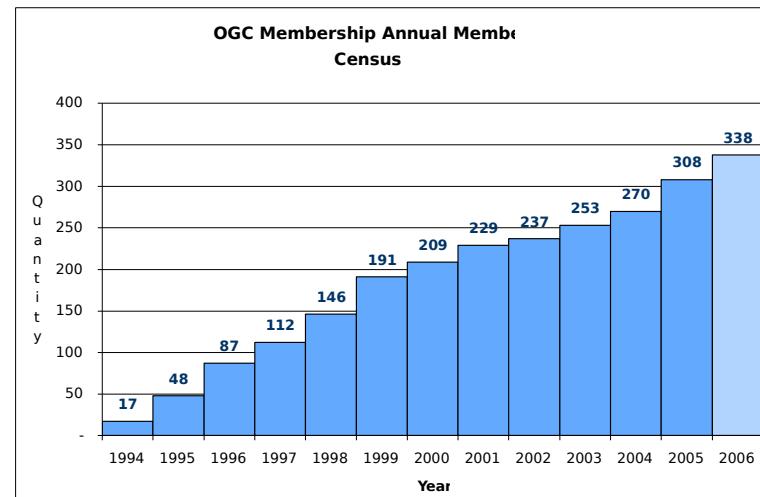


- 345 member organizations from 34 countries & 6 continents
 - 158 North America
 - 146 Europe
 - 40 Asia-Pacific
 - 2 Africa
 - 1 South America
 - 4 Middle East
- 24 approved, publicly available Implementation standards

- Hundreds of product implementations

- Growing base of policy requiring OGC (EU INSPIRE, NGA, NATO C3 Architecture, GEOSS and others)

- Increasing level of joint activities with other standards organizations



OGC-based Policy Positions



- UK Ordnance Survey using GML format to distribute its MasterMap product
- Canada Geospatial Data Infrastructure (CGDI) Implements OGC Web Service Specifications
- CIA and DHS have adopted OGC as part of their Geospatial Enterprise Architectures.
- Australian SDI recognizes OGC standards, numerous enterprise implementations across the nation
- European Union INSPIRE technical architecture built around OGC specifications
- Open Location Services (mobile wireless) being built into consumer offerings from major location services vendors

Still Other OGC Policy Positions

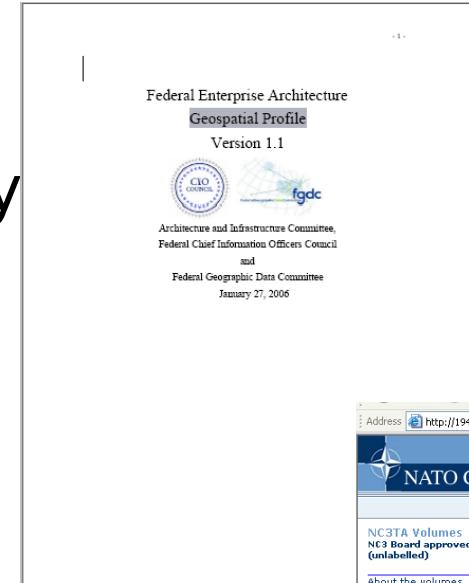


- National Geospatial-Intelligence Agency
- NATO C3
- Federal Enterprise Architecture
- Group on Earth Observations
- DISR

OGC®



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Helping the World to Communicate Geographically

Return on Investment



Multiple studies confirm the value and advantage of open standards based solutions:

- NASA Geospatial Interoperability: Return on Investment Study:
<http://gio.gsfc.nasa.gov/docs/ROI%20Study.pdf>
- Value of Standards, Delphi Report:
<http://www.delphigroup.com/research/whitepapers/20030728-standards.pdf>
- Economic Benefits of Standardization, DIN German Institute for Standardization:
<http://www.sis.se/upload/632248898159687500.pdf>

THE VALUE OF STANDARDS
A DELPHI STUDY
June 2003

Geospatial Interoperability Return on Investment Study
National Aeronautics and Space Administration
Geospatial Interoperability Office
April 2005

Economic benefits of standardization
Published by
DIN German Institute for Standardization e. V.
Beuth Verlag

Booz | Allen | Hamilton
90 years delivering results that endure

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Some of our voting Members



- U.S. Government
 - National Geospatial-Intelligence Agency (NGA)
 - EPA
 - Census
 - NASA
 - USGS
 - DHS
 - Army TEC
 - GSA
 - NOAA
- Industry
 - Leica Geosystems
 - Google
 - Microsoft
 - Oracle
- Industry Continued
 - ESRI
 - Autodesk
 - Intergraph
 - Pitney Bowes Map Info
- Integrators
 - Lockheed Martin
 - BAE Systems
 - Northrop Grumman TASC
 - EADS Astrium
 - Seicorp
 - Boeing
 - Raytheon
 - SRA
 - SRS
 - Mitre



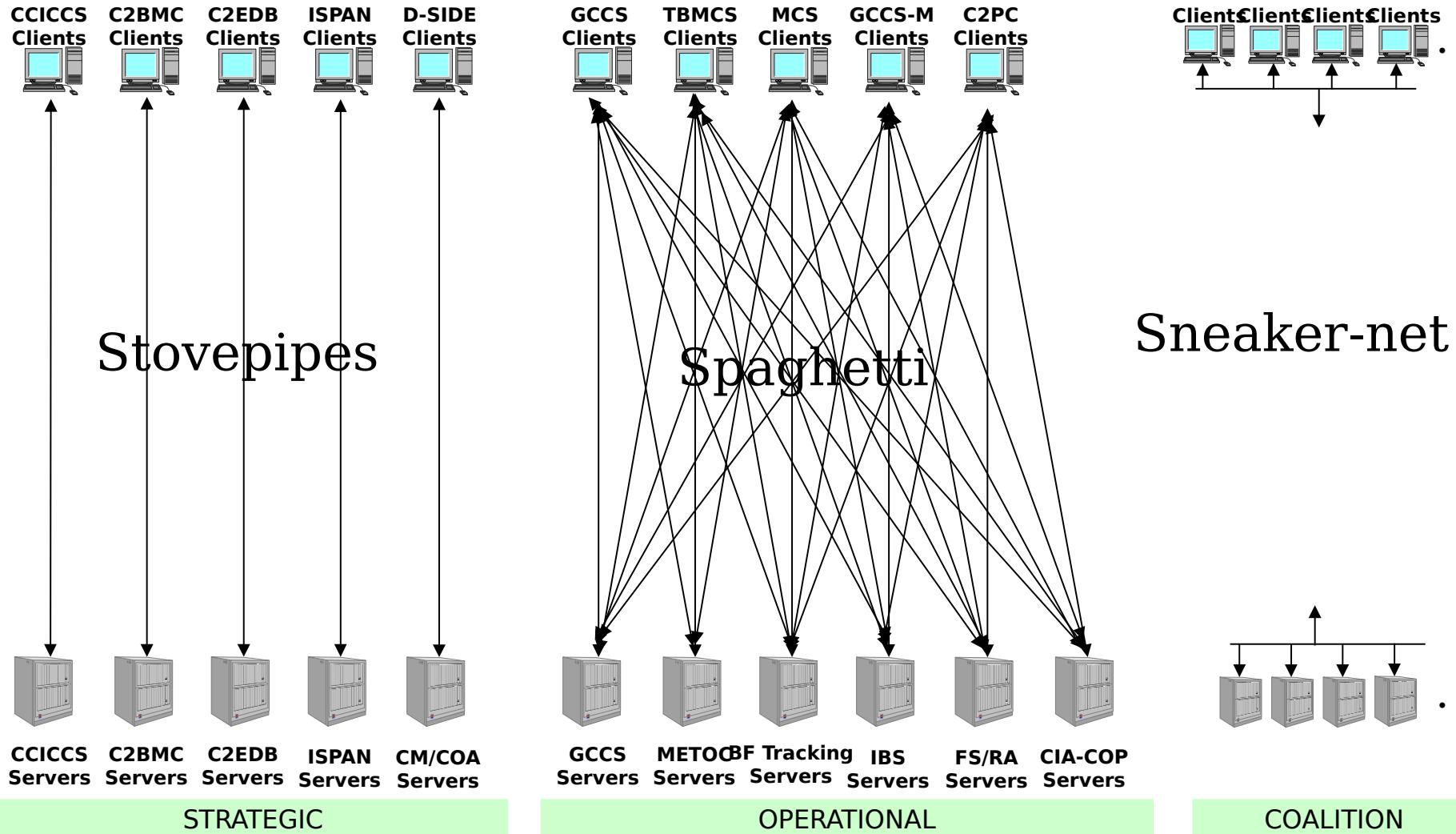
- World Wide Web Consortium (W3C)
- Internet Engineering Task Force (IETF)
- COMCARE
- Digital Geospatial Information Working Group (DGIWG)
- Global Spatial Data Infrastructure Association (GSDI)
- Group on Earth Observations
- International Organization for Standards (ISO) Technical Committee 211
- OASIS
- Object Management Group (OMG)
- Open Mobile Alliance (OMA)
- Open Grid Forum (OGF)
- Simulation Interoperability Standards Organization
- International Alliance for Interoperability (IAI)
- IEEE Geoscience & Remote Sensing Society
- IEEE Technical Committee 9 (Sensor Web)
- Taxonomic Data Working Group (TDWG)



Focus on SOA Interoperability... From This



*Based on "DoD C2 Information Management Approach", courtesy of Mark Kuzma, DISA



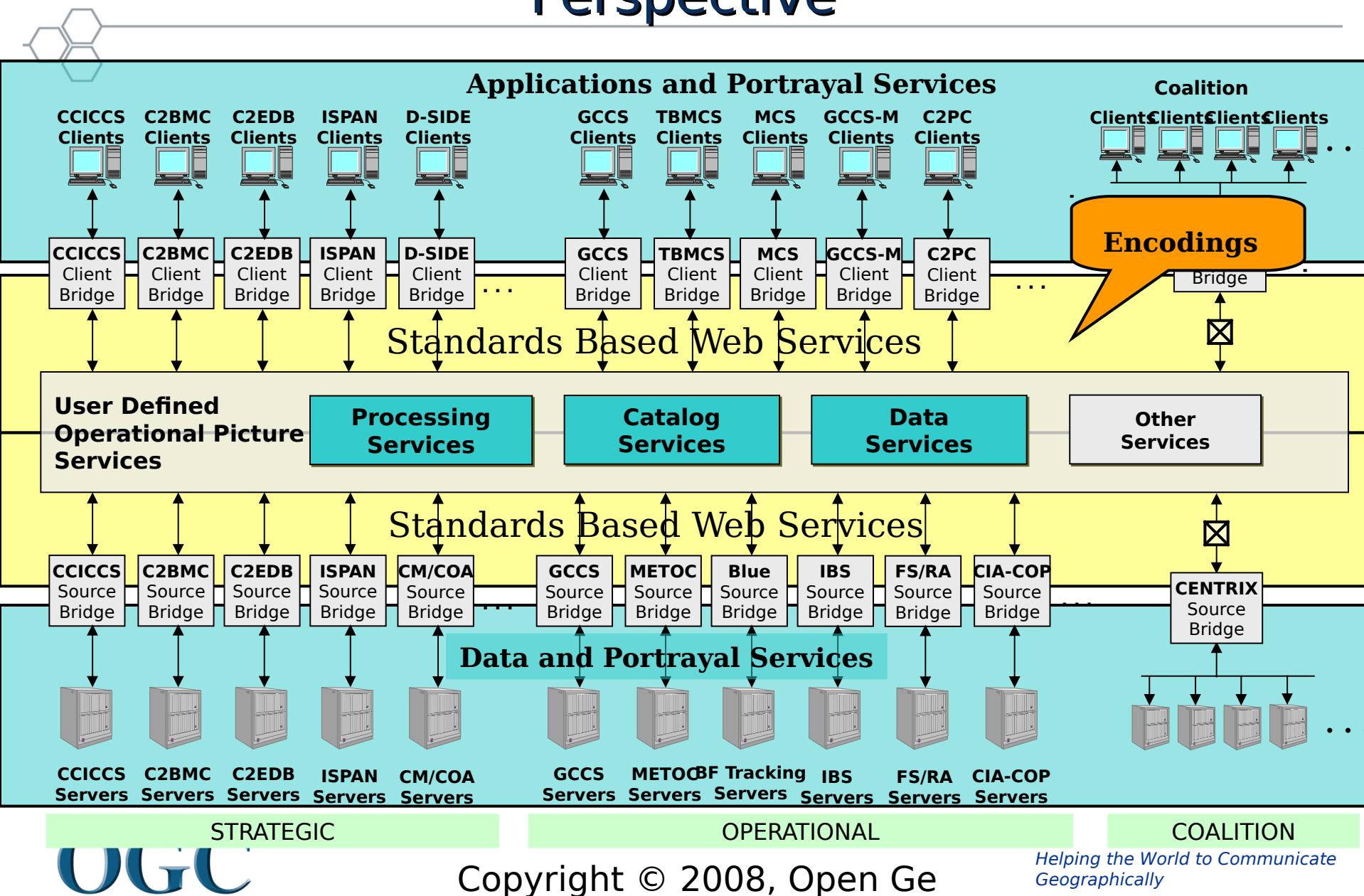
STRATEGIC

OPERATIONAL

COALITION

Helping the World to Communicate Geographically

To This - Net Centric Enterprise Services Perspective



A Critical Resource for Advancing Standards



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2008 Initiatives Underway And In Planning

2008 Forecast – Initiative Summary



- Empire Challenge 08 Pilot
 - Multi-INT, Joint/Coalition DCGS interoperability demonstration
- AECOO Testbed
 - Develop a collaborative, joint relationship and capability between OGC and AEC standards organizations
 - Mature our capability to further advance AEC / Geospatial convergence and interoperability
- GEOSS Architecture Pilot
- Core Services Interoperability Pilot
 - In partnership with COMCARE Alliance, NASFM, NENA
 - Focus on authenticated and directed messaging, radio over IP for emergencies
 - OGC adds geospatial, sensor, and Open Location Services components for situational awareness

2008 Forecast - Initiative Summary



- OGC Web Services Phase 6 Testbed
 - Planning to commence in February 2008
 - Kick off in Summer 2008



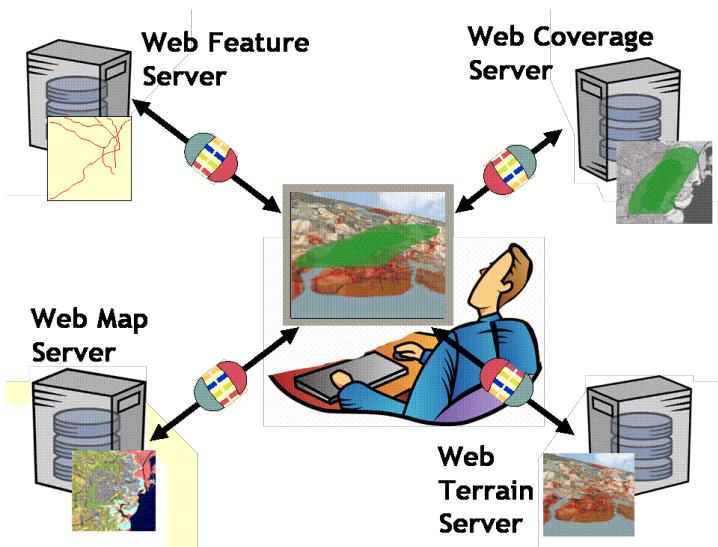
Three Work Areas

Open Web Services
Sensor Web Enablement
3D / CAD / GIS Integration

Open Web Services (OWS) (think classic geospatial)



Just as http:// is the dial tone of the World Wide Web, and html / xml are the standard encodings, **the spatial web** is enabled by OGC standards, such as...

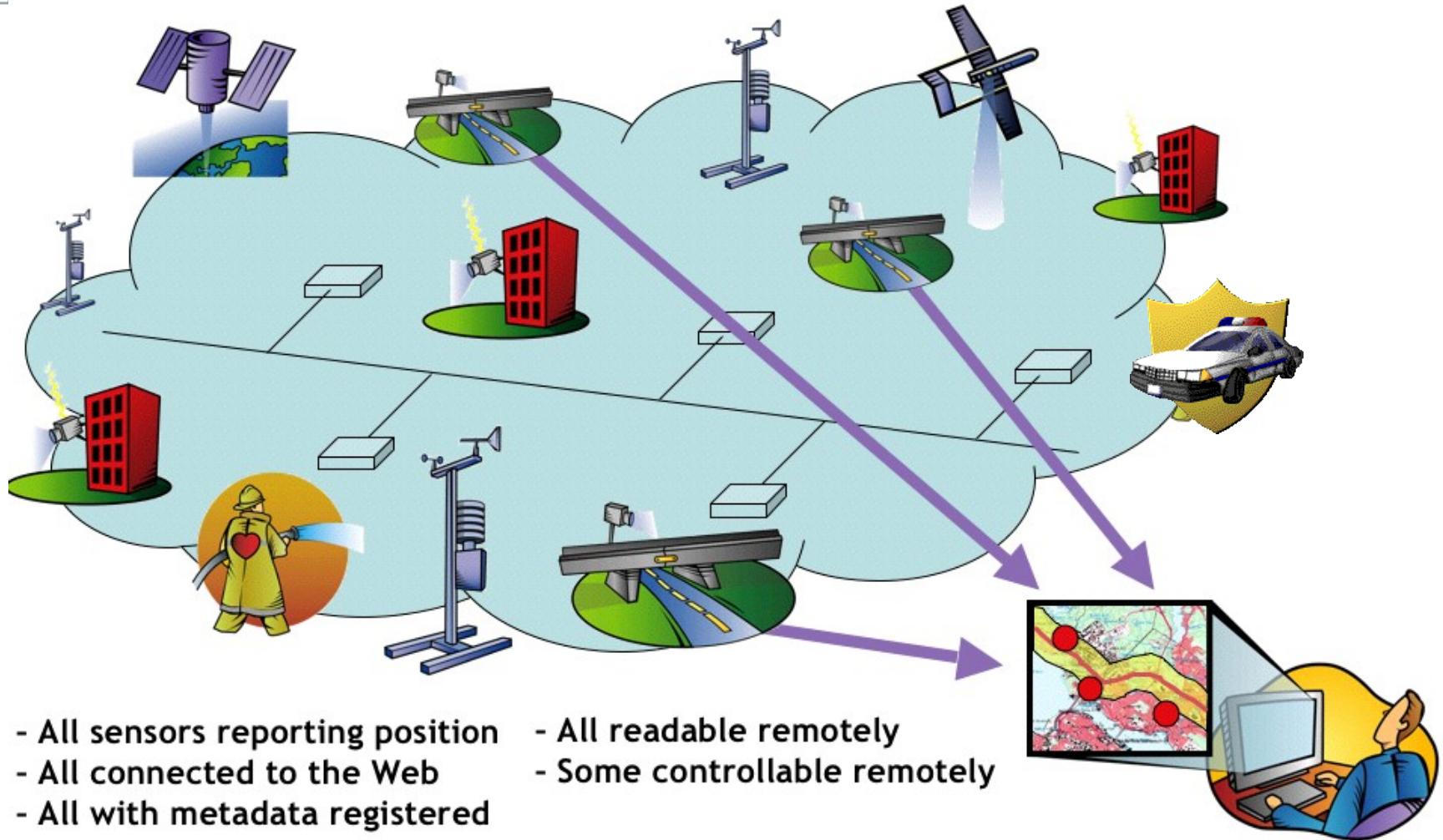


Web Map Service (OGC & ISO)
Style Layer Descriptor (OGC)
Feature Model & GML (OGC & ISO)
Web Feature Service (OGC)
Web Coverage Service (OGC)
Web Map Context (OGC)
Catalogue (OGC)
Metadata (ISO 19115 & OGC)
Web Processing Service (OGC)
Others...

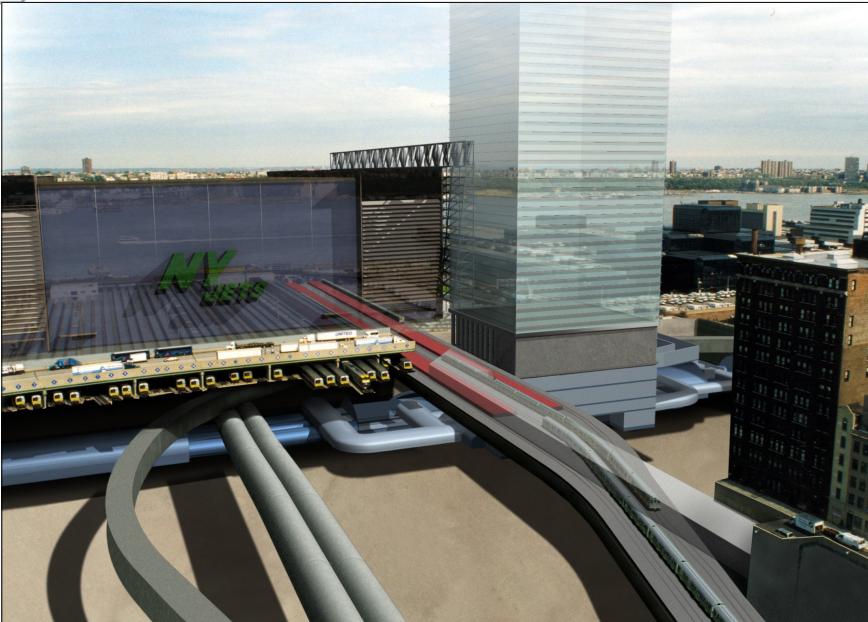
Data related to Critical Infrastructure, Emergency Management, Weather, Climate, Homeland Security, Defense & Intelligence, Oceans Science are geospatial can be managed through OGC web services in the enterprise.



Sensor Web Enablement (SWE) (think about live resources)



CADD GIS 3D Integration (think real time simulation)



Courtesy Parsons
Brinckerhoff



Open Standards approach to sharing of information and services between CAD and geospatial technologies

Critical for Urban Planning, Emergency Response, Homeland Security, Defense and Intelligence, Maintenance,

Summary



- How many times have you considered quitting in frustration - we all have those moments - but resisted when you realized it is hard to change something from within, but impossible to do so from the outside looking in?
- NGA, NASA, EPA, NATO C3, others have accepted that changing the world requires active engagement in it
- Open geospatial standards would not be where they are today without the strong support and participation by NGA, Army TEC, NASA and other government organizations
- But, we could push the noodle further and faster with more participation